



# UNITED STATES PATENT AND TRADEMARK OFFICE

NV  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/707,825   | 01/15/2004  | CHENG-YI LIU         | 10786-US-PA         | 1824             |
| 31561  | 7590        | 01/13/2005           | EXAMINER            |                  |
| JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE<br>7 FLOOR-1, NO. 100<br>ROOSEVELT ROAD, SECTION 2<br>TAIPEI, 100<br>TAIWAN |             |                      | GRAYBILL, DAVID E   |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2822                |                  |

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



**UNITED STATES DEPARTMENT OF COMMERCE**

**U.S. Patent and Trademark Office**

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

| APPLICATION NO./<br>CONTROL NO. | FILING DATE | FIRST NAMED INVENTOR /<br>PATENT IN REEXAMINATION | ATTORNEY DOCKET NO. |
|---------------------------------|-------------|---|---------------------|
|---------------------------------|-------------|---|---------------------|

EXAMINER

ART UNIT

PAPER

20050107

DATE MAILED:

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner for Patents**

David E Graybill  
Primary Examiner  
Art Unit: 2822

This communication is in response to a phone message from Belinda Lee received by the examiner on 1-6-5. In that message, Ms. Lee indicated that, in the Office action filed on 12-20-4, the citation "Takano (20020173108)" appeared to be incorrect, and was not cited on the form PTO-892. Ms. Lee indicated that the call was being placed from overseas, and requested clarification/correction of the record be emailed to her address.

However, the USPTO is not authorized to communicate with applicant via email because there is no record of a written authorization given by applicant for the USPTO to communicate with applicant via email. In addition, it is the examiner's discretion to respond to an email request by alternative means, such as telephonically. See MPEP 502.03. However, Ms. Lee did not provide a telephone number for this purpose.

Attached herewith is the page from the Office action filed on 12-20-4 with the corrected citation, and a form PTO-892 listing the correct citation.

**For information on the status of this application applicant should check PAIR:** Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Alternatively, applicant may contact the File Information Unit at (703) 308-2733. Telephone status inquiries should not be directed to the examiner. See MPEP 1730VIC, MPEP 203.08 and MPEP 102.**

Application/Control Number: 10/707,825

Page 3

Art Unit: 2822

Any other telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (571) 272-1930. Regular office hours:

Monday through Friday, 8:30 a.m. to 6:00 p.m.

The fax phone number for group 2800 is (703) 872-9306.



David E. Graybill  
Primary Examiner  
Art Unit 2827

D.G.

7-Jan-05

Art Unit: 2822

Moreover, "simple adjustment of spatial orientation" has been held to be obvious. *Colt Industries Operating Corp. v. Index Werke, K.G. et al.*, 217 USPQ 1176 (DC 1982).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoda as applied to claim 7 supra, and further in combination with Amagai (6762506).

Yoda does not appear to explicitly disclose the particular claimed copper concentration.

Nevertheless, at column 2, lines 9-16; column 3, lines 5-12; column 4, line 66 to column 5, line 2; and column 53 to column 7, line 5, Amagai discloses this copper concentration. Moreover, it would have been obvious to combine this disclosure with the disclosure of Yoda because it would improve the layer reliability.

Claims 11, 13, 15, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoda as applied to claims 10 and 17, and further in combination with Takano (20030173108).  
~~(20020173108)~~

Yoda does not appear to explicitly disclose electroplating the gold bump and nickel and copper layers.

Notwithstanding, as cited, Yoda discloses electroless plating the gold bump and nickel and copper layers. Furthermore, at paragraphs 71 and 73,

29  
PAPER NO  
20050107